

REMARKS

This paper is responsive to a Final Office Action mailed July 10, 2008. Prior to this response, claims 1-4, 7-8, 11-15, 18-19, 22-25, 28, 31-35, 38, and 41-44 were pending. After amending claim 44, claims 1-4, 7-8, 11-15, 18-19, 22-25, 28, 31-35, 38, and 41-44 remain pending.

In Section 2 of the Office Action, claim 44 is objected to because of an informality. In response, the Applicant has amended claim 44 to depend from claim 12, instead of previously canceled claim 20.

In Section 3 of the Office Action claims 22 and 32, and claims dependent from these claims, have been rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. The Office Action states that the recited “receiver” and “de-jitter module” are software constructs performing functionalities that do not manipulate any hardware or tangible entity, citing MPEP 2106. This rejection is traversed as follows.

The subject matter of claims 22 and 32 may be partially enabled in software, or completely in hardware. However, it is impossible to enable the claimed invention completely in software. The claims recite a system at least partially enabled with hardware. These electrical hardware components may as be referred to as a machine (**Guidelines for Subject Matter Eligibility** – OG Date: 22 November 2005; Annex IV(c)). A “machine” is one of the four enumerated categories of patentable subject matter described in 35 U.S.C. 101.

Taking claim 22 for example, a receiver is recited that receives an IP packet and supplies an RTP packet. The conversion

between protocols requires that the receiver measure the voltage levels of electrical signals, as referenced to a clock, to determine bit values. More explicitly, the header section of the IP packet must be "found" and removed, and the IP packet payload broken into RTP packets. The voltage measurement functions must be performed in hardware. A software algorithm may possibly be used to recognize patterns in the IP packet (i.e. the header), however, these functions are typically performed in hardware, since simple functions performed in hardware are almost always faster than equivalent functions performed with the aid of software.

Claim 22 also recites a de-jitter module that accesses a timestamp packet index field and uses the timestamp to point to a PCR MPEG2TS in the RTP payload, to eliminate variable transmission delay jitter. Again these functions can be enabled using hardware that reads the incoming bit values of the timestamp, and accesses a look-up table in memory to find a relationship between the timestamp value of the PCR position. Once the linkage is determined, jitter in the PCR MPEG2TS can be removed by mapping the signal through a buffer. All these functions can be performed without software. Due to speed considerations, it is often preferable to perform all these functions in hardware. The use of hardware to perform the above-mentioned subject matter would be well understood by one with skill in the art. A similar analysis can be performed for the encapsulation module and transmitter recited in claim 32.

In summary, claims 22 and 32 do not describe a "computer-related invention", but rather a receiver and a transmitter, respectively. Although the claimed invention may be partially enabled using software,

at least some of the recited subject matter *must* be performed in hardware. Therefore, the Office Action is inaccurate when it states that “(t)hese functionalities do not manipulate any hardware or tangible entity”.

Further, “(t)he question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to – process, machine, manufacture, or composition of matter – [provided the subject matter falls into at least one category of statutory subject matter] but rather on the essential characteristic of the subject matter, in particular, its practical utility” *State Street*, 149 F.3d at 1375, 47 USPQ2d at 1602.

Since the transmission and reception of MPEG2TS streams via an IP packet is process that is probably performed billions of times each day, the final result achieved by the claimed systems are “useful, tangible, and concrete”. The claimed invention is “useful” in that the utility of the invention is specific, substantial, and credible (MPEP 2107 and *Fischer*, 76 USPQ2d at 1230). The claimed invention is “tangible” in that it falls outside the judicial exceptions (laws of nature, natural phenomena, abstract ideas) and has a practical application. Finally, the claimed invention produces a “concrete result” in that the process is repeatable (**Guidelines for Subject Matter Eligibility** – OG Date: 22 November 2005).

As noted in the MPEP 2107.02 IV - To properly reject a claimed invention under 35 U.S.C. 101, the Office Action must (A) make a *prima facie* showing that the claimed invention lacks utility, and (B) provide sufficient evidentiary basis for factual assumptions relied upon in making the *prima facie* showing. *In re Gaubert*, 524 F.2d 1222, 1224, 187

USPQ 664, 666 (CCPA 1975). “Accordingly, the PTO must do more than merely question operability – it must set forth factual reasons which would lead one skilled in the art to question the objective truth of the statement of operability.” If the Office Action cannot develop a proper *prima facie* case and provide evidentiary support under 35 U.S.C. 101, a rejection on this ground should not be imposed. See, e.g., *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The Office Action merely states that the claimed inventions are software constructs performing functionalities that do not manipulate hardware or a tangible entity. The Applicant respectfully submits that a *prima facie* case for this statement has not been supported, and the Applicant respectfully requests that the rejection be removed.

In Section 5 of the Office Action claims 1, 3-12, 14-22, 24-32, and 34-40 have been rejected under 35 U.S.C 102(e) as anticipated by Ueda et al. (“Ueda”; US 2004/0190459). The Office Action states that Ueda discloses all the limitations of claims 1, 12, 22, and 32 in paragraphs [0009-0010, 0074-0075, and 0122-0123].

The Office Action states that Ueda discloses the limitation of an index field in an RTP packet header, citing paragraphs [0009-0010], [0074-0075], and Fig. 25. In the ***Response to Arguments Section***, the Office Action states that Ueda discloses the limitation of using the index to point to a PCR MPEG2TS randomly positioned in the RTP packet payload, citing 504, Fig. 25, [0095]. The Office Action states that the storage area is maintained by using indexes (Fig. 4, [0095], and [0099]. This rejection is traversed as follows.

Fig. 25 is a diagram showing the configuration of RTP process unit 500 employed in the conventional communications apparatus" [0008]. Reference designator 504 is described as PCR registers. Packet synthesis unit 506 generates RTP a timestamp from the value of the PCR filed stored in the PCR register 504 [0010]. These paragraphs do not disclose a timestamp index carried in an RTP packet header, or a timestamp index that points to a PCR MPEG2TS randomly positioned in the RTP packet payload.

Paragraphs [0009-0010] in Ueda disclose a conventional process where MPEP2 TS packets are carried in an RTP packet. The process generates a timestamp from the PCR field, which is included in the RTP header. These paragraphs do not disclose a timestamp index carried in an RTP packet header, or a timestamp index that points to a PCR MPEG2TS randomly positioned in the RTP packet payload.

Ueda's paragraphs [0074 and 0075] disclose a transmission process that generates an RTP packet by adding an RTP header to a TS (Fig. 1). The RTP header includes an RTP timestamp and RTP sequence number. A reception process depacketizes the payload from the RTP packet. A timer 130 is used to measure the arrival times and arrival time jitter is computed. These paragraphs do not disclose a timestamp index carried in an RTP packet header, or a timestamp index that points to a PCR MPEG2TS randomly positioned in the RTP packet payload.

Paragraph [0095] describes a storage area for storing information concerning RTP packets, which is managed by an index. The information stored includes headers, start addresses, and data lengths. The Applicant notes that Ueda does not disclose a PCR MPEG2TS stored

in the storage area. Further, Ueda's disclosed index is not carried as a timestamp packet index in an RTP packet header.

Paragraph [0099] discloses a management means that stores a payload in a buffer, and records the start address, data length, and RTP header. An index maintains a correspondence between the stored information and an RTP sequence number. The sequence numbers permit the stored packets to be arranged in the correct order, in the event they are received at incorrect times due to the effect of the network.

Paragraphs [0095] and [0099] do not disclose a timestamp index carried in an RTP packet header, or a timestamp index that points to a PCR MPEG2TS randomly positioned in the RTP packet payload.

Thus, none of the above-cited sections from Ueda describe a process that accesses an index field in a RTP packet header, or that uses the index to locate a PCR MPEG2TS randomly positioned in the RTP payload (claims 1, 22, and 41). Neither does Ueda describe a process that encapsulates an index field to a RTP packet header for use in locating a PCR MPEG2TS that is randomly positioned in the RTP payload (claims 12, 32, and 43).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Ueda does disclose every limitation of claims 1, 12, 22, and 32. Since Ueda does not disclose every limitation of the claimed invention, he cannot anticipate. Claims 3-4, 7-8, and 11, dependent from claim 1, claims 14-15 and 18-19, dependent from claim 12, claims 24-25, 28, and 31, dependent from claim 22, claims 34-35 and 38, dependent from claim

32, claim 42, dependent from claim 41, and claim 44, dependent from claim 43, enjoy the same distinctions from the cited prior art.

In Section 24 of the Office Action, claims 2, 13, 23, and 33 have been rejected under 35 U.S.C. 103(a) with respect to Ueda in view of Ando et al. ("Ando"; US 7,274,863). The Office Action acknowledges that Ueda fails to disclose a timestamp resolution of 500 ns, but that Ando discloses this feature, and that it would have been obvious to modify Ueda to include the teachings of Ando to synchronize the timestamp with the value stored in the TS packet. This rejection is traversed as follows.

The obviousness rejection is based upon the assumption that that Ueda discloses all the limitations of the base claims 1, 12, 22, and 32. However, even if Ando's timestamp resolution is added to Ueda, the combination of references fails to disclose the limitations of accessing an index field in a RTP packet header, or using the index to locate a PCR MPEG2TS that is randomly positioned in the RTP payload, as recited in Applicant's claims 1 and 22. Neither does the combination of references describe a process that encapsulates an index field to a RTP packet header for use in locating a PCR MPEG2TS that is randomly positioned in the RTP payload, as recited in claims 12 and 32.

Further, the motivation of synchronization does not suggest modifications to Ueda that would make the Applicant's claim limitations obvious; based on either the Ando reference, or what was well known at the time. Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Ueda that would make all the limitations obvious, the Applicant requests that the rejection of claims 2, 3, 23, and 33 be withdrawn.

The *Response to Arguments* Section of the Office Action states that the Applicant's arguments have been directed to the references individually, citing *In re Keller*). The Applicant respectfully disagrees. Rather, the Applicant argues that the *combination* of references does not comprise all the limitation recited in the claimed invention. The Applicant also argues that the *combination* of references fails to suggest that the limitations missing from combining references, do not suggest modifications that make these limitations obvious.

It is believed that the application is in condition for allowance and reconsideration is earnestly solicited.

Respectfully submitted,

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